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ABSTRACT

To Examine and Plan for Occupational Requisites and Employment (Project EXPLORE) was an Elementary and Secondary Education Act Title VII-funded program in its fifth and final year at Long Island City and Aviation High Schools in Queens (New York). Project EXPLORE served 510 mainly Spanish-, Korean-, Vietnamese-, Mandarin-, and Cantonese-speaking students of limited English proficiency with fewer than 2 years in English-speaking schools. Students received instruction in English as a second language (ESL) and native language arts, as well as support services including curriculum development, staff development, and parent involvement activities. The project met its ESL objectives and almost all others, although one parent involvement objective could not be evaluated. The development of curriculum materials was a particularly effective component, highlighted by a Chinese science review. Nine tables present evaluation findings. Two appendixes describe instructional materials and class schedules. (Author/SLD)

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OER Report

To Examine and Plan for
Occupational Requisites and Employment
(Project EXPLORE)
Transitional Bilingual Education Grant T003A90129
FINAL EVALUATION REPORT
1993-94

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To Examine and Plan for
Occupational Requisites and Employment
(Project EXPLORE)
Transitional Bilingual Education Grant T003A90129
FINAL EVALUATION REPORT
1993-94

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EXECUTIVE SUMMARY

To Examine and Plan for Occupational Requisites and Employment (Project EXPLORE) was an Elementary and Secondary Education Act (E.S.E.A.) Title VII-funded project in its fifth and final year of operation at Long Island City and Aviation High Schools in Queens. Project EXPLORE served 510 mainly Spanish-, Korean-, Vietnamese-, Mandarin-, Cantonese-speaking students of limited English proficiency (LEP) who had attended an English-speaking school system for under two years.

There were two components to Project EXPLORE: (1) instructional services to LEP students in English as a second language (E.S.L.) and native language arts (N.L.A.); and (2) support services including curriculum development in the students' native languages, staff development, and parental involvement.

Project EXPLORE met E.S.L., N.L.A., career development, attendance, staff development, and four of five parent involvement objectives. The Office of Educational Research (OER) was unable to evaluate one objective for parental involvement because the project did not provide the required data.

Since the beginning of this project the development of curriculum materials has been highly effective. Some of the materials have been published and disseminated to students throughout the city. The Chinese edition of the "RCT Science Review," which was translated by the project staff and published by the High School Division of the Board of Education of the City of New York, has been widely circulated among Chinese-speaking students.

Since this was the last year of funding for Project EXPLORE, OER makes no recommendations for future project implementation.

ACKNOWLEDGEMENTS

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TABLE OF CONTENTS

		PAGE
I.	INTRODUCTION	1
	Project Context	1
	Students' Characteristics	2
	Project Objectives	5
	Project Implementation	7
	Parent and Community Involvement Activities	11
II.	EVALUATION METHODOLOGY	12
	Evaluation Design	12
	Instruments of Measurement	12
	Data Collection	13
III.	FINDINGS	16
	Participants' Educational Progress	16
	Former Participants' Academic Progress in English Language Classrooms	19
	Overall Educational Progress Achieved Through Project	19
	Case Study	23
	Staff Development Outcomes	24
	Curriculum Development Outcomes	24
	Parental Involvement Outcomes	25
IV.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	27
	Achievement of Objectives	27
	Most and Least Effective Components	28
	Recommendation to Enhance Project Effectiveness	26
	APPENDIX A Instructional Materials	29
	APPENDIX B Class Schedules	32

LIST OF TABLES

		PAGE
TABLE 1	Number of Students in Project EXPLORE, by Site and Grade	3
TABLE 2	Students' Native Languages	3
TABLE 3	Students' Countries of Origin	4
TABLE 4	Project Staff Qualifications	8
TABLE 5	Qualifications of Non-Title VII Staff	9
TABLE 6	Pretest/Posttest N.C.E. Differences on the Language Assessment Battery (LAB), by Site	17
TABLE 7	Passing Grades in Native Language Arts, by Site	18
TABLE 8	Passing Grades in Content Area Courses, by Site and Subject Area	20
TABLE 9	Passing Grades in Career and Vocational Courses, by Site and Subject Area	21

I. INTRODUCTION

This document reports the evaluation of the Elementary and Secondary Education Act (E.S.E.A.) Title VII-funded project, To Examine and Plan for Occupational Requisites and Employment (Project EXPLORE) in its fifth and final year by the Office of Educational Research (OER).

PROJECT CONTEXT

The project operated at Long Island City High School and Aviation High School, both in the borough of Queens. This part of New York has experienced a steady increase in the number of immigrant families. In the past four years, the Latino population increased to almost 150,000 and the Asian-American population increased nearly threefold to 152,000. Approximately 70 percent of the families in this area are in a lower income bracket. All demographic data reported here are from 1992-93, the last year for which such data are available.

The student population at Long Island City High School was similar to that of the surrounding community. Of the 1,884 students who registered at Long Island City High School, 40.8 percent were Latino, 24.9 percent were European-American, 20.1 percent were Asian-American, 13.7 percent were African-American, and 0.5 percent were Native American; 47.4 percent were female and 52.6 percent were male. The percentage of students from low-income families, as indicated by eligibility to participate in the free-lunch program, increased from 32 percent in 1991-92 to 67 percent in 1992-1993. Almost one-third (32 percent) of the students were LEP.

Long Island City High School is in an old building (constructed in 1905). A

visit by an OER consultant found classrooms well equipped with instructional materials, although many of the computers were not in working order.

Of the 2,168 students enrolled at Aviation High School, 58.2 percent were Latino, 15.8 percent were African-American, 13.9 percent were European-American, and 12.0 percent were Asian-American.* Of these students, 7.1 percent were female and 92.9 percent were male. Over half of the students (52 percent) were from low-income families and 14 percent were LEP.

Aviation High School, built in 1958, reflected the average rating it had received for overall appearance in the New York City Public Schools 1991-92 School Profile.

STUDENT CHARACTERISTICS

Project EXPLORE served 510 LEP students in ninth through twelfth grade. (See Table 1.) They spoke a variety of languages. (See Table 2.) Participants came from many different countries and had been in the United States for less than two years. (See Table 3.) Scores at or below the 40th percentile on the Language Assessment Battery (LAB) determined LEP status. Other considerations for project eligibility were low native language literacy and student's willingness to participate, as determined by personal interviews with the guidance counselor. Most of the participants (80 percent) came from low-income families.

*Percentages do not equal 100 due to rounding.

TABLE 1

Number of Students in Project EXPLORE,
by Site and Grade

Site	Grade Level				Total
	9	10	11	12	
Long Island City	44	91	90	93	318
Aviation High School	17	68	47	60	192
Total	61	159	137	153	510

TABLE 2

Students' Native Languages

Language	Number of Students	Percentage
Spanish	330	64.7
Korean	64	12.5
Chinese (Mandarin)	51	10.0
Vietnamese	32	6.3
Chinese (Cantonese)	22	4.3
Chinese (Other)	9	1.8
Unreported	2	0.4
Total	510	100

TABLE 3

Students' Countries of Origin

Country	Number of Students
Korea	65
China	58
Vietnam	31
Hong Kong	25
Colombia	12
Dominican Republic	12
Peru	11
Ecuador	10
Mexico	5
Costa Rica	2
El Salvador	2
Venezuela	2
Argentina	1
Haiti	1
Honduras	1
Hungary	1
Puerto Rico	1
Taiwan	1
Moldavia	1
Unreported	268
Total	510

Needs Assessment

A needs assessment at the two schools indicated three primary needs: (1) to provide LEP students with intensive English and native language instruction and support services to improve their school performance; (2) to offer staff development activities; and (3) to provide parents of participants with English as a second language (E.S.L.) courses and informational workshops on the educational system and project goals.

PROJECT OBJECTIVES

Student Objectives

- By June 1994, students participating in the E.S.L. program will make significant gains in English language proficiency.
- By June 1994, 75 percent of the participants (Chinese, Korean, Spanish, or Vietnamese) will demonstrate competency in Native Language Arts (N.L.A.) by attaining scores of 65 or higher on the New York State Board of Regents Competency Test or the local school-made uniform examination.
- By June 1994, 75 percent of the participants will have improved their knowledge of careers and vocations by either: a) Passing project-supplied test on career/vocation topic unit relative to the student's interest or b) Achieving satisfactory rating by the resource teacher or career counselor in a job related activity, such as resume writing, interviewing skills, typing, and writing a thank-you letter.
- By June 1994, 85 percent of the participating students will have met with the bilingual guidance counselor/advisor at least once within the school year to discuss individual academic and personal problems as needed.
- By June 1994, 85 percent of the participating students will have met at least three times with the resource teachers within the school year to discuss career-related topics.

- By June 1994, 85 percent of the 11th grade participating students will have met at least two times within the school year with the resource teacher or guidance counselor/advisor to discuss and arrange work-study visits, and/or internships.

- Within the school year, at least two representatives from private business, the utilities, and/or public institutions will address the participating students in areas of career interests.

- By June 1994, at least two participating student and parent workshops will be organized for career exploration.

- By June 1994, participating students will demonstrate a rate of attendance which will equal or surpass the schoolwide rate.

Staff Development Objectives

- By June 1994, 75 percent of project staff will have attended at least four project sponsored/recommended workshops within the school year.

- By June 1994, the project staff will have attended at least two monthly staff meetings within the school year to plan relevant issues for the improvement of the program.

Parental Involvement Objectives

- By June 1994, 25 percent of participating parents and adult siblings will have participated in at least two program and school meetings.

- By June 1994, 25 percent of participating parents and adult siblings will have participated in an E.S.L. training class offered by the project.

- By June 1994, the project bilingual community family worker will have contacted/visited about 20 percent of the homes of participating students to enhance communications between family and school.

- Parent-teacher conferences will be held twice a year to discuss the progress of each child.

- A newsletter will be published to inform parents on the progress of the project.

PROJECT IMPLEMENTATION

During the 1993-94 school year, Project EXPLORE provided instructional and support services to 510 students and their families. The project's main goal was to promote acquisition of language and content area skills by LEP students.

Project EXPLORE offered parental involvement and in-service staff development activities. The project also provided reimbursement to staff for college credits. Curriculum specialists translated materials into Chinese, Spanish and Vietnamese.

Materials, Methods, and Techniques

Participating schools offered E.S.L. at beginning, intermediate, advanced, and transitional levels, and N.L.A. on literacy to advanced placement levels. The project stressed bilingual instructional methodologies in the content areas.

Teachers of participating students used a wide array of strategies and techniques, including cooperative learning, reading groups, student-produced newsletters, research projects, and experiments. Computers supplemented classroom instruction.

For a list of instructional materials used in the project, please see Appendix A.

Capacity Building

At the end of funding by Title VII, both schools plan to assume the cost of programming. Next year, Aviation High School will assume 50 percent of the cost of a Chinese and Spanish resource specialist, using tax-levy funds.

Staff Qualifications

Title VII staff. The project director, a bilingual curriculum specialist, an educational assistant, a family assistant, and a secretary were funded by Title VII. For a description of degrees held and language proficiencies,* see Table 4.

TABLE 4

Project Staff Qualifications

Position Title	Degree(s)	Language Competence	
Project Director	Ph.D.	Chinese	NS
Bilingual Curriculum Specialist	M.A.	Chinese	NS
Educational Assistant	B.S.	Vietnamese	NS
Family Assistant	B.A.	Chinese	NS
School Secretary	B.A.	Chinese	NS

The project director's responsibilities included supervising and coordinating activities, selecting and training staff, and providing evaluation data. The director had more than six years' experience teaching LEP students.

The bilingual curriculum specialists' responsibilities were to assist classroom teachers in the development and implementation of instructional activities, provide in-service training to teachers, help plan activities for parents of participating students,

*Teaching proficiency (TP) is defined as the ability to use LEP students' native language in teaching language arts or other academic subjects. Communicative proficiency (CP) is defined as a non-native speaker's basic ability to communicate and interact with students in their native language. NS = Native Speaker.

and select instructional material. The specialist had over three years experience in the field.

Other staff. Tax-levy funds paid the salaries of the 14 classroom teachers who provided instructional services to project students. For degree, certifications, and language proficiency, see Table 5.

TABLE 5

Qualifications of Non-Title VII Staff

Position Title	Degrees	Certification	Language Proficiency
Teachers (14)	M.A. 10 M.S. 2 B.A. 1 B.S. 1	Bil. Mathematics 2 Spanish 5 Social Studies 2 Bil. Biology 2 Bil. Chemistry 3	Spanish 9 TP Farsi 1 CP Urdu 1 CP

Staff development

Teachers received tuition assistance toward college courses in E.S.L. or bilingual education. The project director, bilingual curriculum specialist, the educational assistant, and the family assistant attended statewide and citywide conferences. Conferences focused on project management, capacity building, and E.S.L. and bilingual education.

Instructional Time Spent on Particular Tasks

LEP students received one 40-minute period of instruction daily in mathematics, science, and social studies. At the beginning of the school year, 75 percent of the class instruction was conducted in the native language of the targeted population and 25 percent in English. Later in the school year, this ratio was gradually reversed, so that 25 percent of class instruction was in the native language of the targeted students and 75 percent was in English. See Appendix B for examples of class schedules.

Length of Time Participants Received Instruction

Project students had a mean of 8.2 years (s.d.=0.4) of education in a non-English speaking school system, and 2.6 years (s.d.=1.0) of education in the United States. The median time students participated in Project EXPLORE was 30 months.

Activities to Improve Pre-referral Evaluation Procedures for Exceptional Children

Teachers referred those students thought to be in need of special education services to the School-Based Support Team (S.B.S.T.). No members of the S.B.S.T. were bilingual in Spanish or Chinese. Other staff translated as necessary.

Gifted and talented students were identified by teacher judgment and course grades.

Instructional Services for Students with Special Needs

The project offered computer-assisted instruction (C.A.I.) before and during school hours to students having difficulty in classes. Gifted and talented students were given activities which were enriching and would allow them to progress at their own pace.

PARENT AND COMMUNITY INVOLVEMENT ACTIVITIES

The project sponsored a variety of parental involvement activities, including a parent advisory council (PAC), workshops, E.S.L. classes, career events, and field trips.

Representatives from private business and public institutions were invited to address students in areas of career interests.

II. EVALUATION METHODOLOGY

EVALUATION DESIGN

Project Group's Educational Progress as Compared to That of an Appropriate Non-Project Group

OER used a gap reduction design to evaluate the effect of language instruction on project students' performance on the standardized tests. Because of the difficulty of finding a valid comparison group, OER used instead the groups on which the tests were normed. Test scores are reported in Normal Curve Equivalents (N.C.E.s), which are normalized standard scores with a mean of 50 and a standard deviation of 21.1. It is assumed that the norm group had a zero gain in N.C.E.s in the absence of supplementary instruction and that participating students' gains are attributed to project services.

Applicability of Conclusions to All Persons Served by Project

Data were collected from all participating students for whom there were pre- and posttest scores. (There were no pretest data on students who entered the program late, therefore posttest data for them will serve as pretest data for the following year.) Instruments used to measure educational progress were appropriate for the students involved. The LAB is used throughout New York City to assess growth in English skills among students similar to those served by Project EXPLORE.

INSTRUMENTS OF MEASUREMENT

OER compared pre- and posttest scores on the LAB to assess the E.S.L. objective. The N.L.A. and content area objectives in mathematics, science, social

studies, and career education were assessed through course grades, as specified.

All students were tested at the appropriate grade level. The language of the LAB was determined by the test itself.

According to the publisher's test manual, all standardized tests used to gauge project students' progress are valid and reliable. Evidence supporting both content and construct validity is available for the LAB. Content validity is confirmed by an item-objective match and includes grade-by-grade item difficulties, correlations between subtests, and the relationship between the performance of students who are native speakers of English and students who are LEP. To support reliability, KR20 coefficients and standard errors of measurement are reported by grade by form for each subtest and total test. Grade reliability coefficients based on LEP students on the English version ranged from .88 to .96 for individual subtests and from .95 to .98 for the total test.

DATA COLLECTION

To gather qualitative data, an OER evaluation consultant carried out on-site and telephone interviews with the project director several times during the school year and also observed two classes on each of two visits. The project evaluator collected the data and prepared the final evaluation report in accordance with the New York State E.S.E.A. Title VII Bilingual Education Final Evaluation Report format, which was adapted from a checklist developed by the staff of the Evaluation Assistance Center (EAC) East in consultation with the Office of Bilingual Education and Minority Language Affairs (OBEMLA).

Proper Administration of Instruments

Qualified personnel received training in testing procedures and administered the tests. Test administrators followed guidelines set forth in the manuals accompanying standardized tests. Time limits for subtests were adhered to; directions were given exactly as presented in the manual.

Testing at 12-month Intervals

Standardized tests were given at 12-month intervals, following the published norming dates.

Data Analysis

Accurate scoring and transcription of results. Scoring, score conversions, and data processing were accomplished electronically by the Scan Center of the Board of Education of the City of New York. Data provided by the Scan Center were analyzed in the Bilingual, Multicultural, and Early Childhood Evaluation Unit of OER. Data collectors, processors, and analysts were unbiased and had no vested interest in the success of the project.

Use of analyses and reporting procedures appropriate for obtained data. To determine the proportion of students acquiring skills in English, OER computed the percentage of students showing gains on the LAB. To assess the significance of students' achievement in English, OER computed a correlated *t*-test on LAB N.C.E. scores. The *t*-test determined whether the difference between the pre- and posttest scores was significantly greater than would be expected by chance variation alone.

The only possible threat to validity of any of the above instruments might be that LAB norms were based on the performance of English proficient (EP) rather than LEP students. Since OER was examining gains, however, this threat was inconsequential—the choice of norming group should not affect the existence of gains.

III. FINDINGS

PARTICIPANTS' EDUCATIONAL PROGRESS

Participants' Progress in English

The OER evaluation consultant visited a level two E.S.L. class of 23 at Long Island City High School. The classroom was well equipped, and students' work was on display. The teacher presented a lesson on irregular verbs. He dictated a series of questions to the class. Students were required to convert the sentences into the past tense. A paraprofessional assisted students who were experiencing some difficulty with the lesson. The lesson was teacher directed, using a whole language approach. Students communicated with each other mostly in Spanish, interspersed with English words. The teacher, however, presented the lesson entirely in English.

Project EXPLORE proposed the following objective for E.S.L.:

- By June 1994, students participating in the E.S.L. program will make significant gains in English language proficiency.

There were complete pre- and posttest scores on the LAB for 237 students from grades nine through twelve. (See Table 6.) The mean gain of 4.0 N.C.E.s (s.d.=9.3) was statistically significant ($p<.05$).

Project EXPLORE met its objective for E.S.L. In the year previous to the one under review, the project failed to meet its objective for E.S.L.

TABLE 6

Pretest/Posttest N.C.E. Differences on the
Language Assessment Battery (LAB), by Site

High School	Total number of project students	Number of students for whom data were available	Pretest		Posttest		Difference		*t* value
			Mean	S.D.	Mean	S.D.	Mean	S.D.	
Long Island City	318	190	13.6	11.8	18.2	14.5	4.6	9.3	6.89*
Aviation	192	47	24.6	12.3	26.1	14.9	1.6	9.2	1.15*
Total	510	237	15.8	12.7	19.8	14.9	4.0	9.3	6.64*

*$p<.05$

- Overall, and at both sites, participating students showed significant gains on the LAB.

Participants' Progress In Native Language Arts

The project posed the following objective for N.L.A.:

- By June 1994, 75 percent of the participants (Chinese, Korean, Spanish, or Vietnamese) will demonstrate competency in Native Language Arts (N.L.A.) by attaining scores of 65 percent or higher on the New York State Board of Regents Competency Test or the local school-made uniform examination.

In each semester, over 90 percent of the students passed their N.L.A. courses. (See Table 7.)

Project EXPLORE met its N.L.A. objective, as it did in the previous year.

TABLE 7

Passing Grades in Native Language Arts, by Site

High School	Fall		Spring	
	Number Enrolled	Percent Passing	Number Enrolled	Percent Passing
Long Island City	127	89.8	117	89.7
Aviation	31	96.8	30	100
Total	158	91.1	147	91.8

LEP Participants' Academic Achievement

Teachers used a wide array of strategies and techniques, including cooperative learning, research projects, and C.A.I.

The OER evaluation consultant observed a global studies class at Long Island City High School. The teacher presented a lesson on the influence of the geographic

makeup of Japan, and on the demographic and economic development of its population. Students received a handout containing important geographic, demographic and economic facts about the country. They were attentive and actively involved in the lesson as they volunteered to read and summarize information from the handout.

At Aviation High School, the evaluation consultant observed a basic science class. The teacher organized students into groups of five to conduct an experiment on temperature and heat. The teacher used a text that was written in both English and Chinese. The lesson was individually paced, and the teacher used an E.S.L. approach. Students communicated with each other in Chinese and English. The teacher presented the lesson in English and used Chinese for clarification when necessary.

The project did not pose any objectives for content area subjects. Each semester, over 78 percent of the participating students had passing grades in their content area courses. (See Table 8.)

FORMER PARTICIPANTS' ACADEMIC PROGRESS IN ENGLISH LANGUAGE CLASSROOMS

The project did not provide any information on former project participants.

OVERALL EDUCATIONAL PROGRESS ACHIEVED THROUGH PROJECT

Mainstreaming

The project did not propose any specific objectives for mainstreaming. During the year under review, no students were mainstreamed.

TABLE 8

Passing Grades in Content Area Courses, by Site and Subject Area

High School	Subject	Fall 1992		Spring 1993	
		Number of students for whom data were reported	Percent Passing	Number of students for whom data were reported	Percent Passing
Long Island City	Mathematics	245	82.9	241	84.2
	Science	220	91.4	214	93.0
	Social Studies	252	92.5	254	92.9
	Business/Vocational	81	85.2	70	91.4
Aviation	Mathematics	149	85.2	142	78.9
	Science	118	91.5	100	95.0
	Social Studies	164	89.0	160	91.3
	Business/Vocational	162	93.2	154	96.1

- Participating students had high passing rates for all content area courses at both sites and during both semesters.

Career Development

The project proposed the following objectives for career development:

- By June 1994, 75 percent of the participants will have improved their knowledge of careers and vocations by either: a) Passing project-supplied test on career/vocation topic unit relative to the student's interest or b) Achieving satisfactory rating by the resource teacher or career counselor in a job related activity, such as resume writing, interviewing skills, typing, and writing a thank-you letter.

Each semester, at least 85 percent of participating students passed their career and vocational courses. (See Table 9.)

TABLE 9

Passing Grades in Career and Vocational Courses, by Site and Subject Area

High School	Subject	Fall 1993		Spring 1994	
		Number Enrolled	Percent Passing	Number Enrolled	Percent Passing
Long Island City	Business/Vocational	81	85.2	70	91.4
	Keyboarding	29	96.6	41	92.7
Aviation	Business/Vocational	162	93.2	154	96.1
	Keyboarding	--	--	--	--

As it did last year, Project EXPLORE met its career development objective for increased knowledge of careers and vocations.

- By June 1994, 85 percent of the participating students will have met with the bilingual guidance counselor/advisor at least once within the school year to discuss individual academic and personal problems as needed.

- By June 1994, 85 percent of the participating students will have met at least three times with the resource teachers within the school year to discuss career-related topics. Records of these meetings will be kept in the student's file.

- By June 1994, 85 percent of the 11th grade participating students will have met at least two times within the school year with the resource teacher or guidance counselor/advisor to discuss and arrange work-study visits, and/or internships.

During the year under review, 85 percent of participating students met with the bilingual guidance counselor/advisor, and resource teacher the requisite number of times.

The project met its career development objectives for advisement, as it did last year.

- Within the school year, at least two representatives from private business, the utilities, and/or public institutions will address the participating students in areas of career interests.

- By June 1994, at least two participating student and parent workshops will be organized for career exploration.

Representatives from various businesses spoke to the participating students. The project organized joint parent/student workshops for career exploration were organized.

As it had done last year, Project EXPLORE met its career development objectives for meetings and workshops.

Grade Retention

Project EXPLORE did not propose any objective for grade retention. No participating students were retained in grade.

Dropout Prevention

Project EXPLORE did not propose any specific dropout prevention objective. No project students dropped out of school during the course of the year.

Attendance

Project EXPLORE proposed the following objective for attendance:

- By June 1994, participating students will demonstrate a rate of attendance which will equal or surpass the schoolwide rate.

At Long Island City High School, the attendance rate for project students was 96.7 percent, while the schoolwide rate was 84.5 percent. At Aviation High School, the attendance rate for project students was 97.1 percent, while the schoolwide rate was 88.1 percent. The rates for participating students were higher than the schoolwide rates at the respective schools.

Project EXPLORE met its attendance objective.

Placement in Gifted and Talented Programs

No students were placed in a program for the gifted and talented during the current year. The project did not propose an objective in this area.

Enrollment in Post-secondary Educational Institutions

No objective was proposed in this area. No graduating seniors indicated that they would be enrolling in post-secondary educational institutions upon graduation.

CASE STUDY

Project EXPLORE did not provide OER with a case study.

STAFF DEVELOPMENT OUTCOMES

Staff Development Objectives

Project EXPLORE posed the following objectives for staff development:

- By June 1994, 75 percent of project staff will have attended at least four project sponsored/recommended workshops within the school year.
- By June 1994, the project staff will have attended at least two monthly staff meetings within the school year to plan relevant issues for the improvement of the program.

During the school year, project staff members attended the following conferences: the OBEMLA Management Institute and National Association for Bilingual Education (NABE) Conference, Annual New York State Title VII Management Institute and State Association for Bilingual Education (SABE) Conference, a citywide workshop for Asian bilingual teachers, statewide workshop for Asian bilingual teachers, and the fifth Annual Asian-American Youth Conference. Topics covered at these conferences included project management, capacity building, curriculum material evaluation, and leadership and empowerment.

The project director reported that at least 75 percent of project staff attended bilingual education workshops and three monthly staff meetings.

The project met both of its staff development objectives for staff meetings and workshops.

CURRICULUM DEVELOPMENT OUTCOMES

The project did not propose a specific objective for curriculum development. However, staff successfully translated the following materials: *Operation and*

Maintenance of Aircraft Engines, Book 2 (Chinese), *Aircraft Intake and Exhaust System*, Book 3 (Chinese), *Concepts in Modern Biology*, books 1-5 (Chinese), *RCT Global Studies Review* (Vietnamese), *RCT Science Review*, books 1-5 (Chinese), *Glossary for U.S. Government and History* (Vietnamese), *Student Handbook for Aviation High School* (Spanish).

The *RCT Science Review* (books 1-5) and *Concepts in Modern Biology*, were published and made available to students citywide.

PARENTAL INVOLVEMENT OUTCOMES

The project offered workshops, E.S.L. classes, and field trips to parents of participating students.

Project EXPLORE proposed the following parental involvement objectives:

- By June 1994, 25 percent of participating parents and adult siblings will have participated in at least two program and school meetings.

The project director reported that more than 25 percent of parents attended two student/parent workshops.

The project met its parental involvement objective for program and school meetings.

- By June 1994, 25 percent of participating parents and adult siblings will have participated in an E.S.L. training class offered by the project.

The project did not provide OER with the data necessary to evaluate the parental involvement objective for adult E.S.L. classes.

- By June 1994, the project bilingual community family worker will have contacted/visited about 20 percent of the homes of participating students to enhance communications between family and school.

By February 1994 the project bilingual community family worker had contacted approximately 20 percent of the parents of participating students.

The project met its parental involvement objective for increasing communication with the families of project students.

- Parent-teacher conferences will be held twice a year to discuss the progress of each child.

The project director reported that more than 25 percent of parents attended two parent-teacher conferences to inform them of their children's progress.

The project met its parental involvement objective for parent-teacher conferences.

- A newsletter will be published to inform parents on the progress of the project.

Newsletters in Chinese and Spanish were sent to parents informing them about the progress of the project.

The project met its parent involvement objective for publishing a newsletter.

IV. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

ACHIEVEMENT OF OBJECTIVES

Project EXPLORE met E.S.L., N.L.A., attendance, career development, staff development, and four of five parent involvement objectives. OER was unable to evaluate one objective for parental involvement because the project did not provide the required data.

Students participating in Project EXPLORE showed academic progress. All participating students either graduated or were promoted to the next grade. The students showed gains in English, N.L.A., and all content areas.

Project services not only benefited the students academically but also increased their awareness of the importance of education. The attendance rate of project students was significantly higher than that of the schoolwide population and no project students dropped out of school during the course of the year.

Teachers enrolled in college courses and in-service workshops and conferences to increase their knowledge of bilingual and E.S.L. instruction.

The parents of participating students were highly involved in project and school activities.

MOST AND LEAST EFFECTIVE COMPONENTS

Curriculum development has been the most effective component its program. Some of the materials have been published and disseminated to students throughout the city. The Chinese edition of the "RCT Science Review," which was translated by

the project staff and published by the High School Division of the Board of Education of the City of New York, has been widely circulated among Chinese-speaking students. The academic-instructional component was also highly effective.

RECOMMENDATIONS TO ENHANCE PROJECT EFFECTIVENESS

Since this was the last year of funding for Project EXPLORE, OER makes no recommendations for future implementation.

APPENDIX A

Instructional Materials

E.S.L.

Grade	Title	Author	Publisher	Date of Publication
9-10	Turning Points: Communicating in English	G. Iantorno & M. Papa	Addison-Wesley	1989
9	Skills Sharpeners for E.S.L.	Judy Defilippo	Addison-Wesley	1984
9-10	Tales of Mystery & the Unknown	Robert Potter	Global Book Co.	1985
9-10	Map Skills	B.A. Fox	Continental Press	1989
9-10	Vocabulary for High School Students	Harold Levine	Amsco	1982
	Beyond Time and Space	Robert Potter	Global Book Co.	1985
Beg.	Journeys to Fame	Kenneth Kieszok	Learning Trends	1978
Inter.	What's the Story	Linda Markstein	Longman	1989

N.L.A.

Grade	Title	Author	Publisher	Date of Publication
9-12	Teatro Hispano	Jackson/Guillen	N.T.C.	1989
9-12	Literatura Y Arte	Silva	Holt Reinhart	1977
9-12	Don Quijote	Tordy	N.T.C.	1988
9-12	Sombrero de Tres Picos	Alarcon	Oddsey Ross	1985
9	Momentos Hispanos	Luis Cobat	Amsco	1978
10	Literatura & Arte	Copeland-Kile	Holt Reinhart	1989

Instructional Materials, cont'd.

Mathematics

Grade	Title	Author	Publisher	Date of Publication
9-10	Consumer Mathematics	Francis French	Amsco	1980
9-10	Sequential Mathematics	Dressler	Amsco	1980
9	Achieving Competence in Mathematics	Mandery	Amsco	1987
9-12	Integrated Mathematics	Dressler & Keenan	Amsco	1989

Science

Grade	Title	Author	Publisher	Date of Publication
8-9	La Materia Y La Energia	Heimler & Price	Charles Merrill	1985
9	Physical Science	Louise Nolon	Heather	1987
9	RCT Science Review	C. Ruaf & D. Keifer	Prentice Hall	1988
10	Biologia	Mario Dihigo	M.Fernandez	1989
10	Biology & Human Progress	Tanzel	Prentice Hall	1986
11	Contemporary Chemistry	Leonard Salana	Weston Wetch	1986
9-10	Physical Science	Ramsey, et al.	Holt Rinehart	1986
10	Electricity Principals & Application	Richard Fowler	McGraw-Hill	1984
11	Chemicals in Action	Donovan	Holt Rinehart	1987
9	Exploring Material Energy	Kiefer & Raab	Merrill	1985
10	Biology, An Everyday Experience	Kaskel & Hunimer	Merrill	1985
11	Quimica	Smoot, et al.	Merrill	1988

Instructional Materials, cont'd.

Social Studies

Grade	Title	Author	Publisher	Date of Publication
11	Rise of the American Nation	Lewis Paul	Heritage	1987
10	Exploring World History	S. Holt & J. O'Connor	Globe Book Company	1983
11	Exploring Our Nation's History	M. Schwartz J. O'Connor	Globe Book Company	1987
9-10	People and Our World	A. Kownslar	Holt Rinehart	1981
11	Los Estados Unidos: Su Historia, Su Gobierno	Killoran, et al.	Jarrett	1992
11	Nueva Historia de los Estados Unidos	Baker, et al.	Minerva Books	1980
11	Historia De La Humanidad, Libro 1-2	D. Roselle	Giron	1983
11	By the People, For the People	D. Short	Center for Applied Linguistics	1992

Business Education

Grade	Title	Author	Publisher	Date of Publication
*	Business Principles and Management	Everard Shilt	South Western	1989
*	Cerical Techniques	Kestern-Baum	Allen-Bacon Inc.	1984
*	Office Procedeures	Harry Moon	*	1984
*	Business Mathematics	William Dillon	Delmer Publishing	1989
*	Consumer Economics	Nancy Lang	South Western	1988
*	Getting involved with Business	Poshicks Church	Mcgraw Hill	1981

* Information was not provided.

APPENDIX B

Class Schedules

Long Island City High School

Period	Grade 9	Grade 10	Grade 11	Grade 12
1	E.S.L.	U.S. History	E.S.L.	General Chemistry
2	Physical Education	E.S.L.	Sequential Mathematics	E.S.L. lab 5
3	Fundamental Mathematics	Key Boarding	Official Class	Chorus 2
4	Official Class	Official Class	General Chemistry	Official Class
5	Global Studies Level 2	Lunch	Band 2	Chemistry Lab 4 (Spanish)
6	Lunch	Biology	Information Procedures	Lunch
7	Physical Science	Physical Education	U.S. Government	Spanish
8	Study	Sequential Mathematics	Physical Education	Physical Education
9	E.S.L lab 1	E.S.L. Lab 3	Chemistry Lab	Business Comp
10	E.S.L. lab 1	Global Studies	Chemistry Lab	Economics
11	----------	--------	----------	E.S.L. level 5

The day of a student in Project EXPLORE was divided into class periods of 40 minutes. Each student's schedule was the same Monday to Friday.